

EPIBOOST



NEWSLETTER

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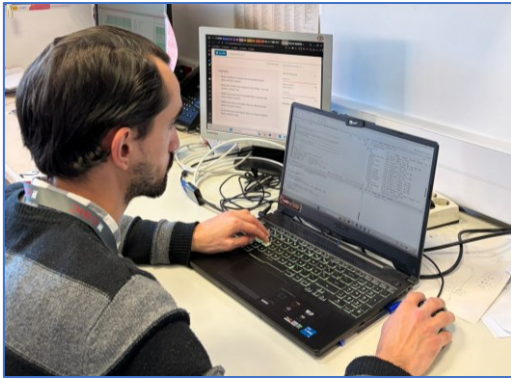
Final Remarks

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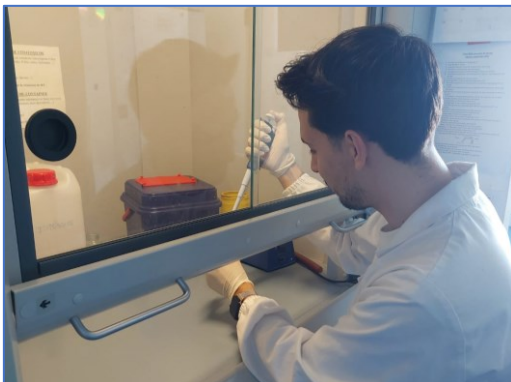
EPIBOOST trains:

Short stays

João Raio (UAVR) is currently at IDAEA-CSIC to **finalize EPIBOOST studies** related to the evaluation of the effects of cadmium and ciprofloxacin exposures in sea bass juveniles. The stay will last from February to July 2026, capitalizing on the support by an **Erasmus+ mobility internship**.



Bruno Pinto (PhD Student at UAVR) is also performing a three-month internship at IDAEA-CSIC from March to May 2026 with a **MIND PhD24 Erasmus+ scholarship**. Bruno is being trained on molecular methods and data analysis focusing on transcriptomic analysis. This analysis will **complete his PhD studies** on the effect of enriched-fed diets exposed to chronic stress conditions.



UAVR-CSIC Exchange: Science Communication Training

Joana Santos (UAVR) completed a science communication exchange at IDAEA-CSIC (16–20 June 2025) where she trained with the **CSIC Science Communication and Outreach Office**. The programme covered press release and news preparation, audience-tailored dissemination, tracking communication metrics, and design and outreach strategies. The **exchange strengthened UAVR's capacity in effective communication and dissemination**.

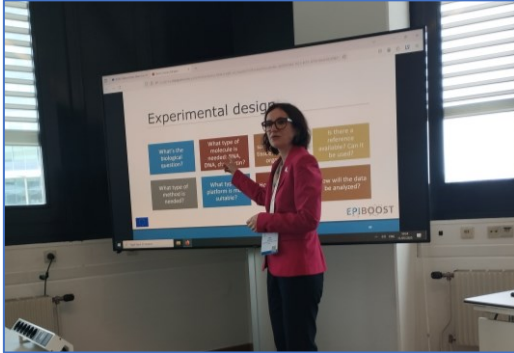
SETAC 2025 Short Course

During the SETAC Europe 35th Annual Meeting (Vienna, 2025), EPIBOOST delivered a fully booked full-day short course titled **"Environmental Omics as Novel Approach Methodology"**. The course introduced participants to a broad range of omics technologies (epigenomics and transcriptomics) and their application in ecotoxicology and regulatory science.



Led by **Jana Asselman (UGent-EPIBOOST)**, and co-taught by **Joana Pereira (UAVR-EPIBOOST)**, **Laia Navarro-Martín (CSIC-EPIBOOST)** and Jessica Head (McGill University), the training covered designing and interpreting omics-based ecotoxic-

ecological studies, challenges of handling big data for regulatory risk assessment, transcriptomic dose-response analysis using ExpressAnalyst, and case-study exercises including EcoToxChips.



The course attracted 22 participants from 18 institutions across 12 countries and 4 continents, demonstrating high international interest in integrating omics into novel approach methodologies (NAMs) for environmental risk assessment.

Chromatin Explorer Summer School 2025



The **Chromatin Explorer Summer School** took place from 3–11 July 2025 at IDAEA-CSIC (Barcelona, Spain), offering an immersive, hands-on introduction to state-of-the-art chromatin profiling methods for early-career researchers. Designed and delivered by **Dr. Noelia Díaz (ICM-CSIC)**, **Dr. Janan Gawra**

(IDAEA-CSIC), and **Dr. Laia Navarro-Martín (IDAEA-CSIC)**, the programme combined theoretical lectures, wet-lab experimentation, and bioinformatics training to provide a full workflow perspective from sample to data interpretation.



A total of 12 participants attended, including Master and PhD students, postdocs and technicians, with representatives from 5 countries both within and outside the EPIBOOST consortium. Participants carried out all key experimental steps and subsequently analysed datasets through guided computational workflows. Troubleshooting, quality control, and best practices emphasised throughout.

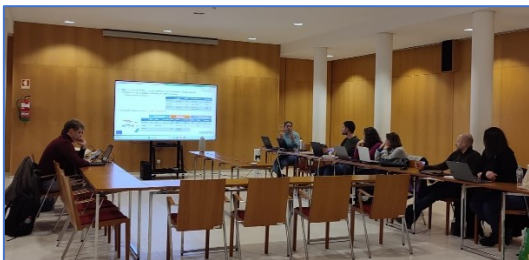


Overall, the Chromatin Explorer Summer School 2025 successfully fulfilled **EPIBOOST's mission to strengthen epigenetics Capacity across Europe**, equipping young researchers with cutting-edge methodological skills and reinforcing collaborative ties within the project community.



EPIBOOST Final meeting:

The EPIBOOST project held its final **General Assembly on 28–30 January 2026** in a hybrid format from the University of Aveiro. The event included partner progress sessions, an open scientific symposium on environmental epigenetics, and collaborative workshops with the Advisory Board and sister projects to develop good-practice guidelines and policy briefs. Twenty-nine participants joined across three days for internal sessions of the project, much more joining for the Symposium.



EPIBOOST Symposium:

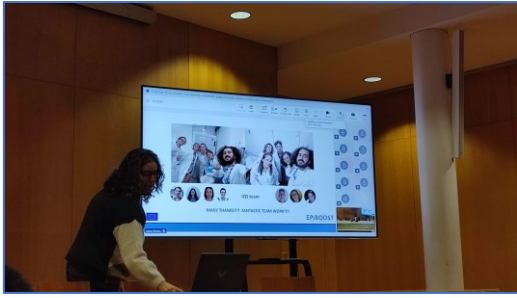
The **EPIBOOST Symposium** offered an open forum to present project results and highlight advances in aquatic environmental epigenetics.

Contributions came from EPIBOOST researchers and international experts from the Advisory Board and the extended consortium joining for a follow-up MSCA-DN

application. After the welcome by CESAM-UAVR and the EPIBOOST coordinators, the programme began with **You Song** (Advisory Board) framing epigenetic evidence within Adverse Outcome Pathways. Microalgae epigenetics was presented by **Helena Cruz** and **Petra Bulankova** (IBENS-CNRS). Microcrustacean responses to contaminants were covered by **Albano Pinto** (EPIBOOST PhD student) and, from an evolutionary angle, by Hollie Marshall (University of Leicester).



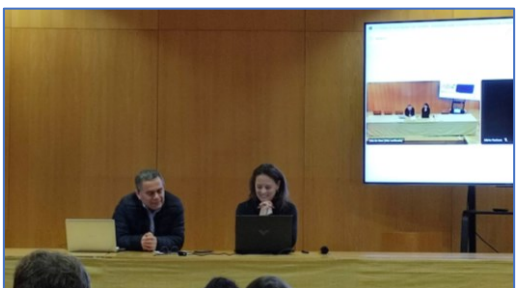
Work on zebrafish and seabass was presented by **Janan Gawra** (former EPIBOOST researcher) and **Laia Navarro-Martín** (EPIBOOST). **Jan Mennigen** (Advisory Board) discussed transgenerational effects mediated by epigenetics.



Multi-omics approaches for field studies were explained by **Camilo Escolar Sierra** (RWTH Aachen University). **Anna Navarro** (Advisory Board) outlined pathways for integrating epigenetic evidence into next-generation environmental regulation, followed by **Ana Rita Guimarães** (EPIBOOST) addressing bioinformatic challenges.



The event closed with remarks from the UAVR Vice-Rector for Research and Innovation and UAVR coordinator **Joana Pereira**. Around 50 participants from six countries attended onsite and online.



As we wrap up this inspiring symposium, the EPIBOOST consortia want to extend deepest **thanks to our Advisory Board for their continued guidance, enthusiasm, and invaluable expertise throughout the project.** Their support has shaped the scientific excellence and collaborative spirit that defined every session. A heartfelt thank you as well to **all participants.** The lively discussions, new connections, and shared vision for the future of environmental epigenetics are what make our community so special.

This last picture is a perfect reminder that **meaningful science grows not only in lectures and labs, but also around tables, conversations, and shared moments.**



Dissemination and Communication

Conference Participation:

35th SETAC Europe Vienna- Bringing Environmental Epigenetics to the Spotlight

EPIBOOST had a strong and visible presence at the **SETAC Europe 35th Annual Meeting in Vienna (2025)**, where the project's Coordinators proudly **chaired a dedicated session on Environmental Epigenetics**, reinforcing the growing relevance of epigenetic tools and concepts within ecological risk assessment.



During the meeting, **EPIBOOST researchers presented the most up-to-date scientific results generated across the project**, sharing advances on epigenomic and transcriptomic responses in key aquatic species, methodological innovation, and new insights supporting next-generation environmental assessment. These contributions showcased the project's multidisciplinary strength and its role in paving the way for integrating omics-based evidence into regulatory frameworks.

With lively discussions, high engagement from the international community, and growing interest in

environmental epigenetics, SETAC 2025 was an excellent stage for EPIBOOST to reinforce its leadership and impact in the field.



EPIBOOST at EPIMAR 2025 – Scientific Leadership and Strong Project Visibility

EPIMAR2025

THIRD INTERNATIONAL SYMPOSIUM
ON EPIGENETICS IN MARINE AND AQUATIC RESEARCH
BARCELONA, SPAIN, MAY 27-30



EPIBOOST played an essential role in the **Third International Symposium on Epigenetics in Marine and Aquatic Research (EPIMAR 2025)**, held in Barcelona from 27–30 May 2025. **Dr. Noelia Díaz** (ICM-CSIC) and **Dr. Laia Navarro-Martín** (IDAEA-CSIC) participated in the Organizing Committee, **Prof. Jana Asselman** (UGent) was invited to present a keynote lecture, which positioned EPIBOOST at the forefront of emerging research in environmental epigenetics.



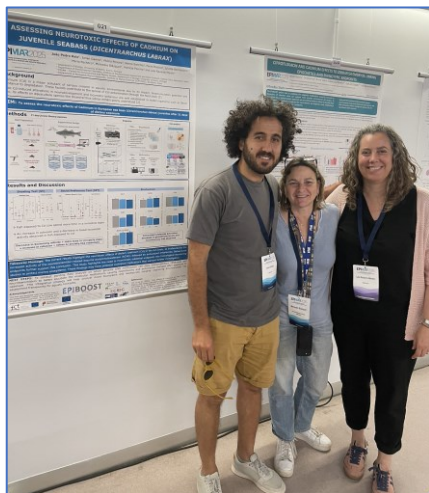
Throughout the meeting, multiple EPIBOOST researchers delivered oral and poster presentations, sharing the latest project results and reinforcing the consortium's scientific impact. With high scientific engagement, strong visibility, and active participation across sessions, EPIMAR 2025 provided an excellent platform to showcase **EPIBOOST's cutting-edge contributions and to strengthen collaborations within the global aquatic epigenetics community.**

seabass (*Dicentrarchus labrax*) exposed to cadmium and ciprofloxacin.



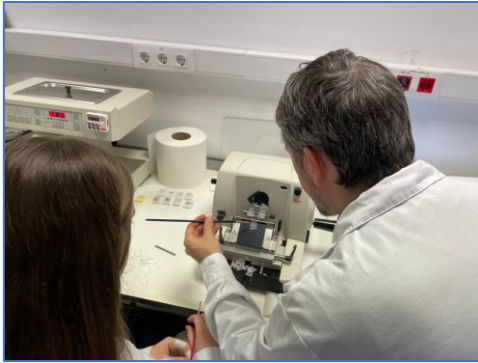
Connecting Science and Schools: IDAEA Hosts Local Student Visit

EPIBOOST members at IDAEA-CSIC recently welcomed a **secondary school student and her biology teacher from INS Manuel Blancafort (La Garriga, Spain)** for an educational visit focused on histopathology assessment in the brain. **The visit supported the student's final-year high-school research project**, offering her the opportunity to learn first-hand about sample preparation, microscopic analysis, and how histopathology contributes to understanding environmental impacts on biological tissues. This engaging outreach activity reflects EPIBOOST's ongoing commitment to inspiring young learners and strengthening connections with the local educational community.



Best Poster Award

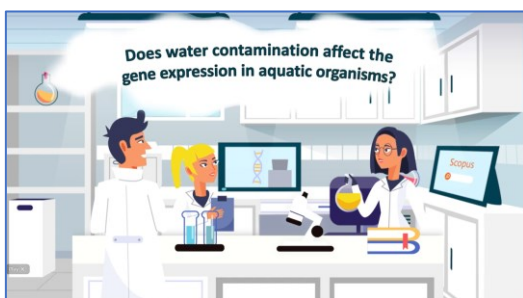
This past September the CSIC-UAVR team won a best poster **award in the Aquaculture Europe Meeting** in Valencia, Spain. **Janan Gawra** explained the results linking behaviour disruption to epigenetics, transcriptomics, oxidative stress and in juvenile



Social Media

Educational video

The third and last educational video of the EPIBOOST series promoting literacy on environmental epigenetics is available on the project Youtube channel. After the first, on 'What is epigenetics?' and the second, on 'How epigenetics meets evolution?', this third video was launched on November 24th 2025, celebrating the National Day of Scientific Culture in Portugal. It shows '**Epigenetics meeting environmental sciences**' using the rationale behind the research performed in EPIBOOST, always employing accessible, non-technical language. Click [here](#) to watch.



EPIBOOST Final Video

The EPIBOOST final project video is a journey through the science, people, and impact behind the project. Filmed across the consortium's laboratories and

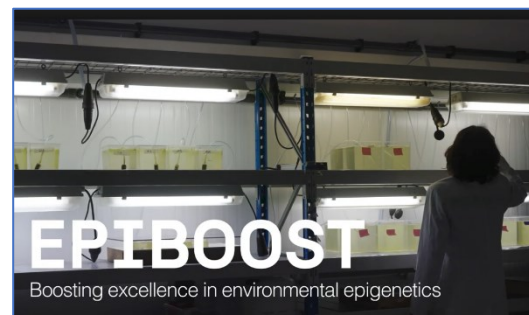
featuring interviews with researchers, students, and coordinators, the video explains what environmental epigenetics is, why it matters, and how EPIBOOST has strengthened European excellence in this emerging field.

The video highlights:

- The international collaboration between UAVR, UGent and CSIC.
- Hands-on training and career development of early-stage researchers
- Key scientific findings on epigenetic responses to environmental contaminants
- The long-term legacy in shaping future environmental research and regulation.

The final video captures the spirit of the project: **collaborative, forward-looking, and deeply committed to protecting ecosystems and public health.**

A great closing snapshot of the project—now ready to be shared with the wider community (https://youtu.be/7dX9iZ_K36Q).



Final Remarks

And we are heading this amazing adventure that was the EPIBOOST project... The initial freezing feeling of starting something involving a significant effort of coordination in a cutting-edge field, was replaced by the enthusiasm of making a meaningful contribution to leverage the skills and capacity of the University of Aveiro, strengthen collaborations that made EPIBOOST funding possible, and promote the field of aquatic environmental epigenetics across the European Research Area.

We've performed amazing research in the field, always collaboratively as paramount to achieve excellence in Science. Several scientific outputs are already out, but many more are yet to come as we will continue committed to delivering our results openly beyond the EPIBOOST formal timeframe (stay tuned!). We have done our research with rigor, but also with our hearts, because good Science is made by people and people are not just brains. We gained many colleagues, a huge network, but we have made many friends on the way, while responding to the research challenges of the project.

Beyond research, EPIBOOST was in its core a capacity-building project. The team had the opportunity to experience the benefits of visiting among partners to learn and improve skills, experience a different environment and enlarge perspectives. Infrastructure was also given attention, benefiting the UAVR Sequencing Centre and fish housing and testing facilities. We organized three international advanced courses and three short courses in environmental epigenetics, as well as two summer schools, reaching more than 150 early-career researchers in Europe and abroad, and establishing new collaborations that enlarged the network of the Consortium. We will soon have news, hopefully positive, on follow-up funding, so stay tuned! We did not forget soft and transferable skills... Three soft skills workshops, a workshop on the EU RRI framework, an AI bootcamp and one immersive workshop on proposal writing were (co-) organized by EPIBOOST, reaching more than 100 UAVR researchers and Research Management and Administration staff.

You know it all through our communication channels and hopefully you will continue following us! See you soon and keep **boosting** environmental **EPI**genetics!